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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,031	08/22/2001	Hany Aziz	D/A0888	9210

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EXAMINER

PHINNEY, JASON R

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/935,031	Applicant(s) AZIZ ET AL.	
	Examiner Jason Phinney	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 6, 14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of the phrase "at least about" renders the claims indefinite, see MPEP 2173(b)A.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-8 and 10-15 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent No. 6,429,451 to Hung.

Regarding Claim 1, Hung discloses an organic light emitting device that comprises a first electrode (Figure 2, #204), a second electrode (#240), and a luminescent region including an organic electroluminescent material between the first electrode and the second electrode (#215), wherein one of the first electrode and the second electrode includes both a substantially transparent charge injecting layer (#220) adjacent to the luminescent region and an electrically conductive light absorbing layer (#230).

Regarding Claim 2, Hung further discloses that the device should comprise a substrate (#202), wherein one of the first electrode and the second electrode is between the substrate and the luminescent region (see Figure 2).

Regarding Claim 3, Hung further discloses that the charge-injecting layer should have a thickness ranging from about 10 Angstroms to about 50,000 Angstroms (Column 7, Lines 35-37).

Regarding Claim 4, Hung further discloses that the light absorbing layer should be deposited by thermal evaporation in vacuum (Column 7, Lines 35-37).

Regarding Claim 5, Hung further discloses that the light absorbing layer should exhibit at least 50% extinction of light entering the light absorbing layer (Column 8, Lines 38-41).

Regarding Claim 6, Hung further discloses that the light absorbing layer should exhibit at least 90% extinction of light entering the light absorbing layer (Column 8, Lines 38-41).

Regarding Claim 7 Hung discloses an organic light emitting device that comprises in sequence: (a) a cathode including: (i) an electrically conductive light absorbing layer (#230), and (ii) a substantially transparent electron injecting layer (#220); (b) a luminescent region including an organic electroluminescent material (#215); and (c) an anode that is substantially transparent to light (#204).

Regarding Claim 8, Hung further discloses that the device should further comprise a substantially transparent substrate (#202), wherein the anode is between the luminescent region and the substrate (see Figure 2).

Regarding Claim 10, Hung further discloses that the cathode should further comprise a metallic layer (#240 and Column 7, Lines 64-65), wherein the light absorbing layer is between the metallic layer and the electron injecting layer (see Figure 2).

Regarding Claim 11, Hung further discloses that the cathode should further comprise a buffer layer (Figure 3, #'s 372 and 374) between the light absorbing layer (#350) and the electron-injecting layer (#320).

Regarding Claim 12, Hung further discloses that the electron-injecting layer should have a thickness ranging from about 10 Angstroms to about 50,000 Angstroms (Column 7, Lines 35-37).

Regarding Claim 13, Hung further discloses that the light absorbing layer should be deposited by thermal evaporation in vacuum (Column 7, Lines 35-37).

Regarding Claim 14, Hung further discloses that the light absorbing layer should exhibit at least 50% extinction of light entering the light absorbing layer (Column 8, Lines 38-41).

Regarding Claim 15, Hung further discloses that the light absorbing layer should exhibit at least 90% extinction of light entering the light absorbing layer (Column 8, Lines 38-41).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,429,451 to Hung in view of U.S. Patent No. 5,834,893 to Bulovic.

Hung discloses the device of Claim 7 as described above.

Hung fails to exemplify that the cathode should be between the luminescent region and the substrate.

Bulovic in an alternate organic light emitting device teaches this inversion of the device in order to change the direction in which the light is emitted (see Figure 1).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to invert the device taught by Hung in the Manner employed by Bulovic in order to change the direction of the emitted light.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable U.S. Patent Application No. 2002/0033664 to Kobayashi in view of U.S. Patent No. 6,420,031 to Parthasarathy.

Kobayashi teaches an organic light emitting device which comprises in sequence: (a) a cathode (Figure 4, #2); (b) a luminescent region including an organic electroluminescent material (#3); and (c) an anode including: (i) a substantially transparent hole injecting layer (#4), and (ii) an electrically conductive light absorbing layer (#7 and Paragraph 28).

Kobayashi fails to exemplify that the cathode should be transparent.

Parthasarathy in an alternate OLED teaches the cathode should be substantially transparent to light in order to emit light in both directions.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to produce the cathode of Kobayashi of a transparent material as taught by Parthasarathy in order to allow the OLED to emit light in both directions.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Phinney whose telephone number is (703) 305-3999. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


JP

April 14, 2003



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